National Institute of Environmental Health Sciences

Climate change risks for African agriculture

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Abstract:

The Intergovernmental Panel on Climate Change (IPCC) assessment of major risks for African agriculture and food security caused by climate change during coming decades is confirmed by a review of more recent climate change impact assessments (14 quantitative, six qualitative). Projected impacts relative to current production levels range from -100% to +168% in econometric, from -84% to +62% in process-based, and from -57% to +30% in statistical assessments. Despite large uncertainty, there are several robust conclusions from published literature for policy makers and research agendas: agriculture everywhere in Africa runs some risk to be negatively affected by climate change; existing cropping systems and infrastructure will have to change to meet future demand. With respect to growing population and the threat of negative climate change impacts, science will now have to show if and how agricultural production in Africa can be significantly improved.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3060257

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Policymaker

Exposure : ☑

weather or climate related pathway by which climate change affects health

Food/Water Security

Food/Water Security: Agricultural Productivity

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Africa

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Malnutrition/Undernutrition

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Exposure Change Prediction

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Research Article

Resilience: ☑

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: ☑

time period studied

Long-Term (>50 years)

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content